
Fencing

Design Manual
Chapter 10
Roadside Development
and Erosion Control

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Fencing is intended to prevent unauthorized entry to and exit from a road system. The Iowa DOT may construct and maintain fences or other appropriate physical separations within the primary highway right-of-way to effectively enforce and control access to the highway. According to the Iowa DOT's Iowa Primary Road Access Management Policy, fencing must be included as part of the design plan on roadways with Priority 1 access control. For all other roadways, fencing will be placed at the discretion of the District Offices.

In required locations, provide continuous fencing at least 1 foot inside the right-of-way limits and between the ends of dual bridges. Fences should also be provided at culverts and livestock passes when needed to prevent livestock from entering the roadway. Typical fencing layouts can be found on Standard Road Plan [MI-101](#).

New Construction

On new construction, fencing must be one of three types: field fence, chain link fence, or deer fence.

Field Fence

Field fence is normally used unless chain link or deer fence is required. Construction details for field fence are found on Standard Road Plan [MI-103](#).

Chain Link Fence

Details for chain link fence are found on Standard Road Plan [MI-102](#). Chain link fence must be at least 6 feet high and is used only in areas where pedestrian traffic is anticipated. Normally, such areas include the following:

- Any area where three or more residences occur within 100 feet of the right-of-way or 20 or more residences occur within 500 feet of the right-of-way, along a 500-foot length of the highway as measured longitudinally along the highway centerline.
- Any area zoned residential (with platted lots and roadways) where construction of homes meeting the criteria above can be reasonably anticipated within the next 5 years.
- Any area that is zoned industrial and has industry present.
- Along the entire frontage of an official city, county, state, or federal park or preserve.
- Along the entire frontage of a baseball field, golf course, playground, etc., where pedestrian traffic is present or anticipated.
- Along the entire frontage of an abutting school property.
- Immediately adjacent to or abutting any walkway or bike path.

Chain link fence is normally installed outside the clear zone only (see Section [8A-2](#) for more on clear zones). However, if circumstances require a chain link fence within the clear zone, a special design is required which replaces the top rail with a tension wire.

Deer Fence

Deer fence is only used when requested by the Traffic and Safety or Location and Environment. Construction details for deer fence are found on Standard Road Plan [MI-103](#).

Other than New Construction

Generally, fencing will be replaced in kind when repairs are made. However, field fence will be replaced with chain link fence when the conditions stated under “New Construction” *and* one of the following is met:

- Existing fence has deteriorated to a point where replacement is required.
- Replacing the fence is part of a planned reconstruction project.
- It is evident that existing fence is not controlling access as desired.

Transitions in Fencing Type

In many areas, the type of fencing needs to change because of either an existing or a planned change in land use. Designers should avoid frequently transitioning from one type of fence to another. However, when a change in fencing is warranted, it should be accomplished at a logical point, such as at an interchange, a bridge, or a large culvert at least 4 feet by 4 feet or larger. If no obvious transition point is apparent, the designer should seek a logical point within $\frac{1}{4}$ to $\frac{1}{2}$ mile of the change in land use. Such decisions, as necessary, will be made jointly by the designer and the District Office Design Engineer.

Chronology of Changes to Design Manual Section:

010E-001 Fencing

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| 6/28/2018 | Revised
Changed reference to MI-104 in Deer Fence subsection to MI-103. Removed metric units. |
| 7/29/2011 | Revised
Added statement that districts will decide whether fencing is placed on roadways other than Priority 1 facilities.
Added deer fence information and updated Standard Road Plan numbers. |